CONTENTS

PART 1. FEBRUARY

PAGE

KETTLEWELL, H. B. D., and BERRY, R. J. (Oxford and London). Gene flow in a Cline. *Amathes glareosa* Esp. and its melanic *f. edda* Staud. (Lep.) in Shetland 1

KETTLEWELL, H. B. D., BERRY, R. J., CADBURY, C. J., and PHILLIPS, G. C. (Oxford, London, Reading and Aberdeen). Differences in behaviour, dominance and survival within a cline. *Amathes glareosa* Esp. (Lep.) and its melanic *f. edda* Staud. in Shetland 15

BREESE, E. L. (Aberystwyth). The measurement and significance of genotype-environment interactions in grasses 27

JINKS, J. L., PERKINS, JEAN M., and BREESE, E. L. (Birmingham and Aberystwyth). A general method of detecting additive, dominance and epistatic variation for metrical traits. II. Application to inbred lines . . . 45

JAIN, H. K., RAUT, R. N., and NERWAL, S. K. (New Delhi). Nucleolar organiser as a hyperactive locus for RNA synthesis 59

ŻUK, J. (Warsaw). The additional heterochromatic chromosome and its influence on sex chromosome pairing in *Rumex* 69

TURNER, J. R. G. (York). The basic theorems of natural selection: A naive approach 75

THOMAS, R. L. (Aberystwyth). Inter-population variation in perennial ryegrass 2. Population variance coefficients 85

THOMAS, R. L. (Aberystwyth). Inter-population variation in perennial ryegrass. 3. Interaction of heritable and environmental variation . . 91

KIMURA, MOTOO, and MARUYAMA, TAKEO. (Mishima). The substitutional load in a finite population 101

BUCIO ALANIS, L., PERKINS, JEAN M., and JINKS, J. L. (Birmingham). Environmental and genotype-environmental components of variability. V. Segregating generations 115

KHUSH, G. S., and RICK, C. M., (Philippines and California). Tomato secondary trisomics: Origin, identification, morphology, and use in cytogenetic ananlysis of the genome 129

NOTES AND COMMENTS :

LINTS, F. A., and JONES, R. N. Effect of heterochromatin on the relationship between nuclear DNA content and chromosome volume . . 147

LUCAS, A. M. The effect of population structure on the success of insect introductions 151

GREENWOOD, J. J. D. Apostatic selection and population density . . 157

ROSS, M. D. Heteromorphism and the evolution of diocy in *Epigaea repens* 162

REVIEWS :

BUTLER, J. A. V. Gene control in the living cell 167

PARSONS, F. A. The genetical analysis of behaviour 167

JOHANSSON, I., and RENDEL, J. Genetics and animal breeding . . 169

PAGE

HAWKES, J. G. (Ed.). Reproductive biology and taxonomy of Vascular plants 171

COLD SPRING HARBOR SYMPOSIUM ON QUANTITATIVE BIOLOGY 32. Antibodies 172

BOOKS RECEIVED 173

GENETICAL SOCIETY OF GREAT BRITAIN : Abstracts of Papers 175

PART 2. MAY

CROWLEY, J. G. (Aberystwyth). Chiasma frequency and longevity in *Lolium multiflorum* 181

VED BRAT, S. (Oxford). Fertility and selection in garden hyacinth II. Zygotic selection 189

HULL, P. (Glasgow). Maternal-foetal incompatibility associated with the *H-3* locus in the mouse 203

STEWART, J. (Cambridge). Biometrical genetics with one or two loci. I. The choice of a specific genetic model 211

STEWART, J. (Cambridge). Biometrical genetics with one or two loci. II. The estimation of linkage 225

NAIK, S. N., SUKUMARAN, P. K., and SANGHVI, L. D. (Bombay). Haemoglobin polymorphism in Indian zebu cattle 239

ADAMKEWICZ, S. LAURA (Virginia). Colour polymorphism in the land isopod *Armadillidium nasatum* 249

JONES, R. NEIL, and REES, H. (Aberystwyth). An anomalous variation due to *B* chromosomes in rye 265

DARLINGTON, C. D., and HAQUE, ASHRAFUL (Oxford). The replication and division of polynemic chromosomes 273

EDMUNDS, M. (Ghana). Polymorphism in the mimetic butterfly *Hypolimnas misipus* in Ghana 281

NOTES AND COMMENTS :

SIMMONDS, N. W. Variegated mutant plastid chimeras of potatoes . 303

STAMBERG, Judith. Genetic control of recombination in *Schizophyllum commune* : separation of the controlled and controlling loci . . 306

BERBEROVIĆ, L. An excess of L^ML^N heterozygotes in a South European population 309

MCWHIRTER, K. Heritability of spot-number in Scillonian strains of the Meadow Brown butterfly (*Maniola jurtina*) 314

THOMPSON, K. F. Frequencies of haploids in spring oil-seed rape (*Brassica napus*) 318

EWENS, W. J. A note on the fixation of a favoured gene 320

REVIEWS :

KRINGLEN, E. Heredity and environment in the functional psychoses . 325

CROW, J. F., and NEEL, J. V. (Eds.). Proceedings of the third international congress of human genetics 326

PAGE

WRIGHT, S. Evolution and the genetics of populations. Volume 1 : Genetic and biometric foundations 327

HALDANE, J. B. S. The causes of evolution 328

PANTEL, G. Specific survival 328

YI-YUNG HSIA, D. Human development genetics 328

SEARLE, A. G. Comparative genetics of coat colour in mammals . . 330

SEBEOK, T. A. (Ed.). Animal communication. Techniques of study and results of research 331

NARDONE, R. M. (Ed.). Mendel centenary : genetics, development and evolution 333

KING, ROBERT C. A dictionary of genetics 333

RIEGER, R. MICHAELIS, A., and GREEN, M. M. A glossary of genetics and cytogenetics 333

BOOKS RECEIVED 335

PART 3. AUGUST

LAWRENCE, M. J. (Birmingham). Variation in wild populations of *Papaver dubium*. II. Variations between populations 337

CLARKE, B. (Edinburgh). The evidence for apostatic selection . . . 347

PANDEY, K. K. (Palmerston North, N.Z.). Elements of the *S*-gene complex. III. Chromosome fragments and naturally occurring *S*-gene mutations in *Nicotiana bonariensis* 353

STAMBERG, JUDITH (Birmingham and Harvard). Genetic control of recombination in *Schizophyllum commune :* the occurrence and significance of natural variation 361

SIMCHEN, G., and STAMBERG, JUDITH (Birmingham and Harvard). Genetic control of recombination in *Schizophyllum commune :* specific and independent regulation of adjacent and non-adjacent chromosomal regions . 369

PARKER, P. F. (Liverpool). Genetic variation in diploid *Dactylis*. III. Panicle, spikelet and floret characters 383

WATSON, PATRICIA J. (Roslin). Evolution in closely adjacent plant populations. VI. An entomophilous species *Potentilla erecta*, in two contrasting habitats 407

BISHOP, J. A., and KORN, M. E. (Liverpool). Natural selection and cyanogenesis in white clover, *Trifolium repens* 423

PURDOM, C. E. (Lowestoft). Radiation-induced gynogenesis and androgenesis in fish 431

BATTEN, J. L., and THODAY, J. M. (Cambridge). Identifying recombinational lethals in *Drosophila melanogaster* 445

JAIN, S. K. (Davis, California). Increased recombination and selection in barley populations carrying a male sterility factor. II. Genotypic frequencies at marker loci 457

JINKS, J. L., and PERKINS, JEAN M. (Birmingham). The detection of linked epistatic genes for a metrical trait 465

NOTES AND COMMENTS :

DRETS, M. E., CARDOSO, J. H., and NAVARRO, A. Sex chromosome inversion in a mosaic girl 477

PAGE

PETTIGREW, R., DRISCOLL, C. J., and RIENITS, K. G. A spontaneous chlorophyll mutant in hexaploid wheat 481

SIMMONDS, N. W. Genetics of spectacle in diploid potatoes . . . 487

KAYANO, H. A chromosomal chimera in a plant of *Lilium callosum* with a complex translocation 490

REVIEWS :

KIRK, R. L. The haptoglobin groups in man 497

PICKENS, D. K. Eugenics and the progressives 497

PURCELL, H. D. History and race in Cyprus 498

GARDNER, E. J. Principles of genetics 501

BURCH, P. R. J. An enquiry concerning growth, disease and ageing . 502

NEILSON-JONES, W. Plant chimeras 503

ESSER, K., and KUENEN, R. Genetics of fungi 504

GENETICAL SOCIETY OF GREAT BRITAIN : Abstracts of Papers . . . 507

PART 4. NOVEMBER

HAYWARD, M. D., and NSOWAH, G. F. (Aberstwyth). The genetic organisation of natural populations of *Lolium perenne*. IV. Variation within populations 591

MATHER, K. (Southampton). Selection through competition. I. . . 529

DURRANT, A. (Aberystwyth). Phenotype analysis of diallel crosses . . 541

FORD, E. B., and SHEPPARD, P. M. (Oxford and Liverpool). The medionigra polymorphism of *Panaxia dominula* 561

FRANKEL, G. H., SHINEBERG, B., and MUNDAY, ANNE (Canberra). The genetic basis of an invariant character in wheat 571

COTTEN, J., and HAYES, J. D. (Aberystwyth). Genetic resistance to the cereal cyst nematode (*Heterodera avenae*) 593

PANDEY, K. K. (New Zealand). Elements of the *S*-gene Complex. IV. *S*-allele polymorphism in *Nicotiana* species 601

BUTCHER, A. C. (Birmingham). Non-allelic interations and genetic isolation in wild populations of *Aspergillus nidulans* 621

WILSON, D., and COOPER, J. P. (Aberystwyth). Diallel analysis of photosynthetic rate and related leaf characters among contrasting genotypes of *Lolium perenne* 633

NOTES AND COMMENTS :

AHMAD, M., and ISLAM, N. Interallelic complementation at the tryptophan-3 locus in *Neurospora crassa* 651

AHMAD, M., CHOUDHURY, K. U., and ISLAM, S. M. Complementation and recombination between indole utilising tryptophan-3 mutants of *Neurosopra crassa* 656

SLIZYNSKI, B. M. Sperm utilisation and radiation sensitivity in *Drosophila melanogaster* 660

REVIEWS :

MAYNARD SMITH, J. Mathematical ideas in biology 667

DOBZHANSKY, TH., HECHT, M. K., and STEERS, W. C. (Eds.). Evolutionary biology Vol. 2 668

PAGE

STERN, CURT. Genetic mosaics and other essays 669

PEACOCK, W. J., and BROCK, R. D. (Eds.). Replication and recombination of genetic material 670

CLEGG, P. C., and CLEGG, A. G. Hormones, cells and organisms . . . 670

CLARKE, CYRIL A. (Ed.). Selected topics in medical genetics . . . 671

EWENS, W. J. Population genetics 672

FORD, C. E., and HARRIS, H. (Eds.). New aspects of human genetics 673

COLD SPRING HARBOR SYMPOSIUM 31. The genetic code 677

WOESE, CARL R. The Genetic Code; the Molecular basis for genetic expression 679

LERNER, MICHAEL. Heredity, evolution and society 679

NEUFFER, M. G., JONES, L., and ZUBER, M. S. The mutants of maize . 680

BOOKS RECEIVED 681

GENETICAL SOCIETY OF GREAT BRITAIN : Abstracts of Papers . . . 683

INDEX OF AUTHORS. 693

INDEX OF SPECIES 700

INDEX OF SUBJECTS. 702